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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/567,977 | 02/10/2006 | Toshiyuki Mishima | 39700 | 5467 |
| 52054 7590 09/20/2007 PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108 | | | EXAMINER KERNS, KEVIN P | |
| | | | ART UNIT 1725 | PAPER NUMBER |
| | | | NOTIFICATION DATE 09/20/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patdocket@pearne.com
dchervenak@pearne.com

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/567,977 | Applicant(s) MISHIMA ET AL. | |
| | Examiner Kevin P. Kerns | Art Unit 1725 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 and 09 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants' admitted prior art (AAPA – paragraphs [0002]-[0005] of specification; and "Prior Art" Figure 5) in view of JP 8-155881 (complete translation of this Japanese document was provided with the previous Office Action).

The applicants' admitted prior art (AAPA) discloses an arc welding robot (6-shaft joint arm type – see paragraph [0002] of AAPA) that is actuatable according to an operation pattern based on a previously set program or manually operated for welding,

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such that the welding robot further includes a robot main body 101 that is structurally operable to be controlled, in which the robot main body includes a base portion, a swing portion mounted on the base portion, an upper arm portion mounted on the swing portion, and a forearm portion mounted on the upper arm portion; a protectively covered wire feed device 105 that feeds a welding wire 103 and that is mounted on a mounting member 106 on a forearm portion 101d; a rotary pipe shaft 301 for holding the wire feed device 105 on the robot main body 101, such that the rotary pipe shaft 301 is arranged between the mounting member 106 and the forearm portion 101d, with the wire feed device 105 operable to be rotated on a rotation surface that extends substantially in the same direction as the feeding direction of the welding wire 103; and protectively covered connecting cables (for welding power supply and for wire feed device power supply) and a protectively covered gas hose 109 (for supply of welding assist gas) that are guided toward the wire feed device 105 (AAPA; paragraphs [0002]-[0005] of specification; and "Prior Art" Figure 5). The applicants' admitted prior art (AAPA) does not disclose that the connecting cable and/or the gas hose are guided through a hollow portion of the rotary pipe shaft and through an inside of the forearm portion, the upper arm portion, the swing portion, and the base portion of the robot main body.

However, JP 8-155881 discloses an industrial robot that prevents twist of tool hoses/cables, in which the industrial robot includes a (connecting) cable 10 guided through a hollow portion of a rotary pipe shaft (guide tube 22 with a turning part 2) and through an inside of the forearm portion, the upper arm portion, the swing portion, and the base portion of the robot main body of the industrial robot adjacent the motor 36 that

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controls operation of the robot arms and wrists, such that the connecting cable guided through the rotary pipe shaft and through an inside of the forearm portion, the upper arm portion, the swing portion, and the base portion of the robot main body is advantageous for preventing twisting and obstruction of tool hoses/cables adjacent a robot arm (abstract; paragraphs [0003]-[0008] of translation; and Figures 1-3).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the welding robot disclosed by the applicants' admitted prior art (AAPA), by using the connecting cable guided through the rotary pipe shaft and through an inside of the forearm portion, the upper arm portion, the swing portion, and the base portion of the robot main body, as taught by JP 8-155881, in order to prevent twisting and obstruction of tool hoses/cables adjacent a robot arm (JP 8-155881; abstract; and paragraphs [0003] and [0008] of translation).

Response to Arguments

4. The examiner acknowledges the applicants' amendment and replacement drawing sheet received by the USPTO on August 9, 2007. The replacement drawing sheet overcomes prior drawing objections. The amendments overcome prior objections to the abstract, specification, and claims, as well as prior 35 USC 112, 2nd paragraph rejections. Claims 1-5 remain under consideration in the application.

5. Applicants' arguments filed August 9, 2007 have been fully considered but they are not persuasive.

With regard to the applicants' remarks/arguments on pages 7-9 of the amendment, it is first noted that the applicants' amendments to independent claim 1 set forth further details of the "robot main body" that are not particularly limiting (i.e. present on the robot main body of the applicants' admitted prior art (AAPA)), and these new limitations are addressed by addition of newly underlined portions in above section 3. The applicants' major argument is that the combination of references cited (the applicants' admitted prior art (AAPA) and JP 8-155881) does not disclose "a rotary pipe shaft for holding the wire feed device on the robot main body such that the wire feed device is rotated on the rotation surface thereof extending substantially in the same direction as a feeding direction of the welding wire.", as the applicants state in the paragraph bridging pages 7 and 8 of the remarks. The examiner respectfully disagrees with this statement, as the AAPA discloses "the wire feed device 105 operable to be rotated on a rotation surface that extends substantially in the same direction as the feeding direction of the welding wire 103" (see 35 USC 103(a) rejections in above section 3). Although the applicants argue (on the top of page 8) that the rotating surface appears to be horizontal (as opposed to vertical), it is noted that not only are these features not present in the claims, but also the alleged differences in orientation do not alter the structure and function of the rotating surfaces. In the 1st full paragraph on page 8 of the remarks, the applicants recite advantages of their invention in comparison to the prior art, but the only apparent difference is that the applicants' independent claim 1 includes that the connecting cable and/or the gas hose are guided through a hollow portion of the rotary pipe shaft and through an inside of the forearm

portion, the upper arm portion, the swing portion, and the base portion of the robot main body. However, JP 8-155881 discloses these features, with the motivation of preventing twisting and obstruction of tool hoses/cables adjacent a robot arm (JP 8-155881; abstract; and paragraphs [0003] and [0008] of translation).

With regard to the use of functional language throughout independent claim 1, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The examiner notes that neither the manner of operating a disclosed device nor material/article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from the prior art. See MPEP 2114 and 2115. Further, the examiner notes that intended use limitations, such as “for feeding a welding wire” and “for holding the wire feed device...”, do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states “Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.” Also see *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) that states “While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function”. See MPEP 2114.

As a result of the teachings and motivation provided by the combination of the AAPA and JP 8-155881, a *prima facie* case of obviousness has been established, and claims 1-5 remain rejected.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on (571) 272-1177. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns* 9/16/07
Primary Examiner
Art Unit 1725

KPK
kpk

September 16, 2007